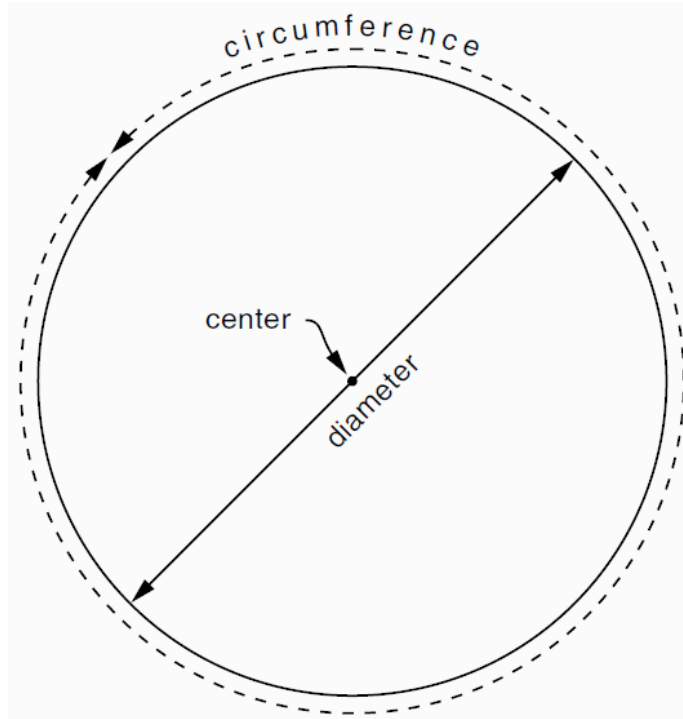
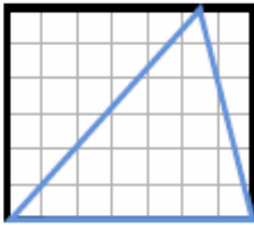


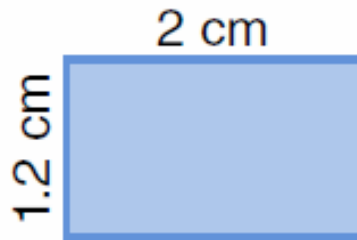
About 3 Times Circle Rule — the circumference of a circle is about 3 times the diameter of the circle



Area — the amount of surface inside a 2-dimensional figure, commonly measured in square units such as *square feet* or *square centimeters*

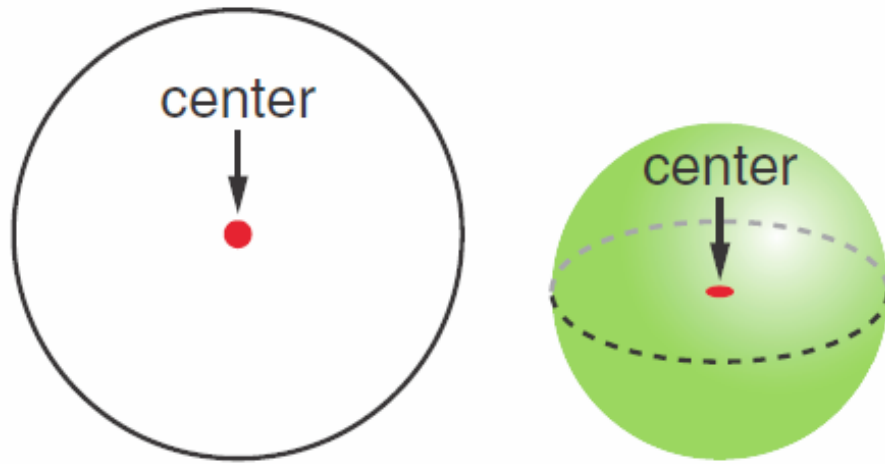


A triangle with area
21 square units



A rectangle with area
 $1.2 \text{ cm} * 2 \text{ cm} = 2.4 \text{ square centimeters}$

Center of a Circle – the point in the plane of a circle equally distant from all points on the circle



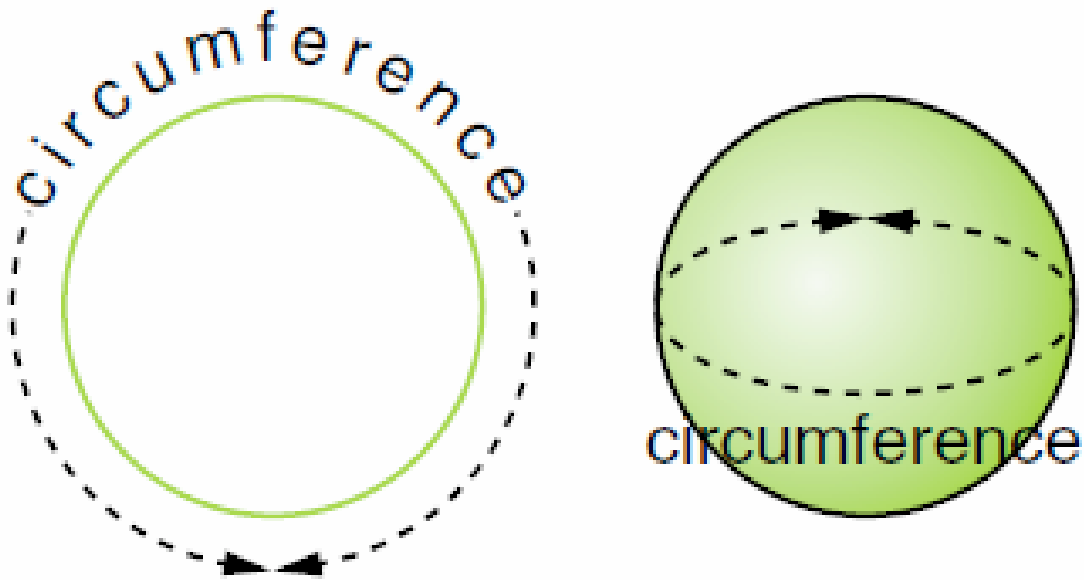
Centimeter (cm) – a metric unit of length, equivalent to 10 millimeters, $\frac{1}{10}$ of a decimeter, and $\frac{1}{100}$ of a meter

$$\text{Centi} = \frac{1}{100}$$

**A centimeter is
approximately the width
of your pointer finger.**



Circumference — the distance around a circle; its perimeter; the circumference of a sphere is the circumference of a circle on the sphere with the same center as the sphere

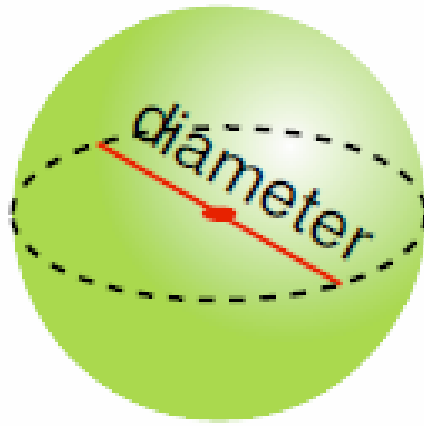
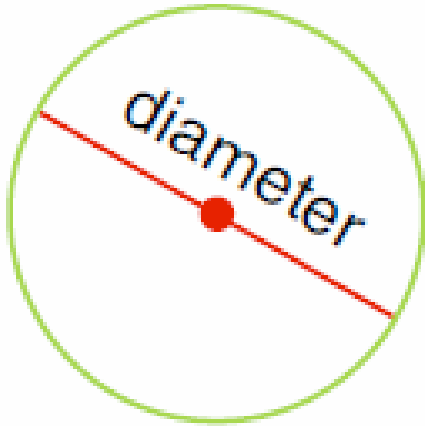


Decimeter (dm) — a metric unit of length equivalent to $\frac{1}{10}$ of a meter or 10 centimeters

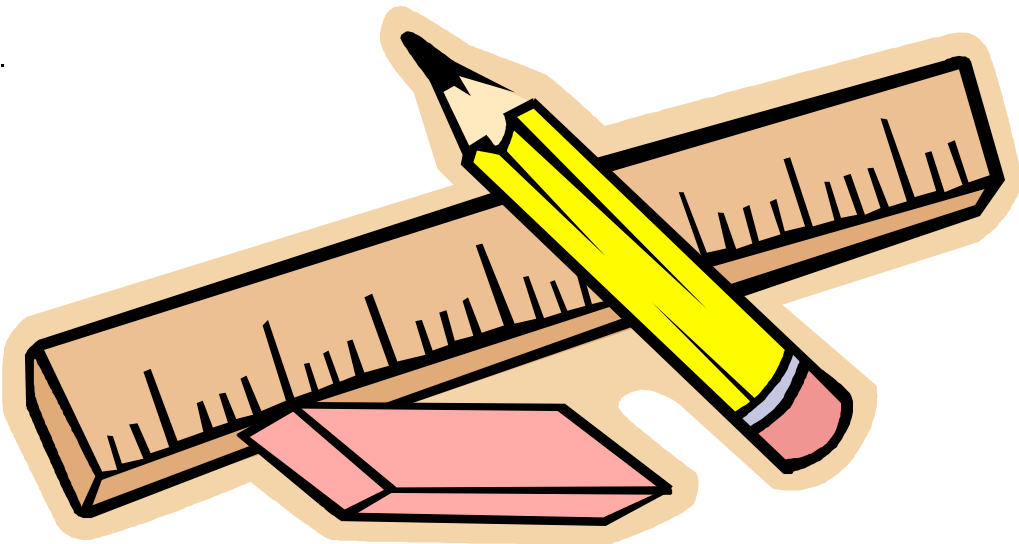
Deci = $\frac{1}{10}$



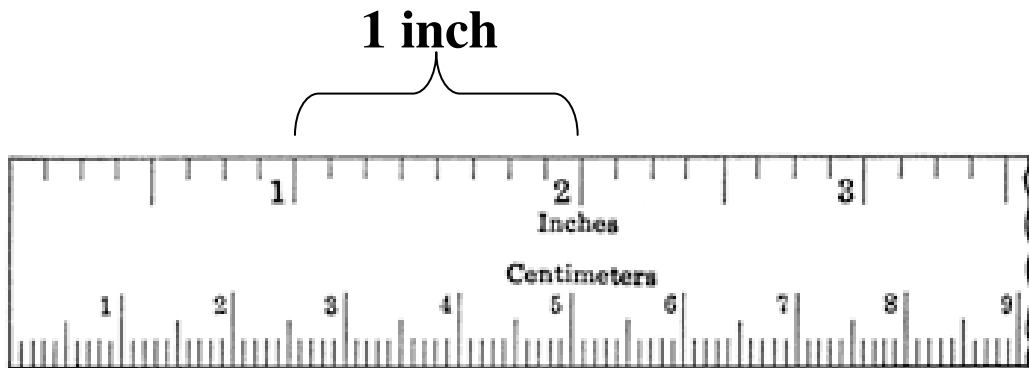
Diameter — a line segment that passes through the center of a circle or sphere and has endpoints on the circle or sphere; the length of such a segment



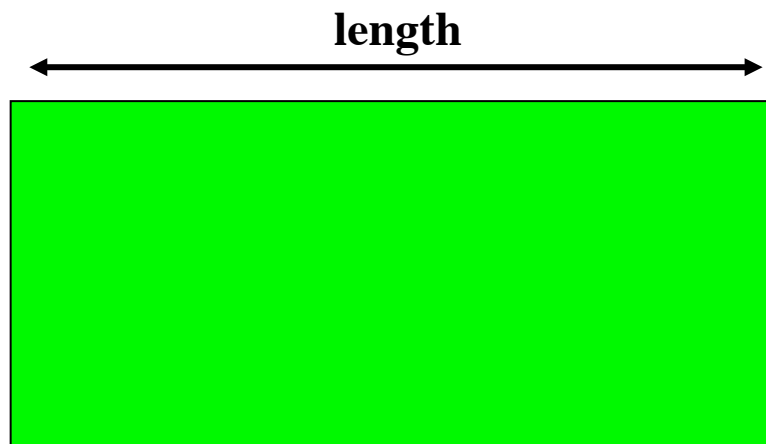
Foot (ft) — a U.S. customary unit of length equal to 12 inches or $\frac{1}{3}$ of a yard



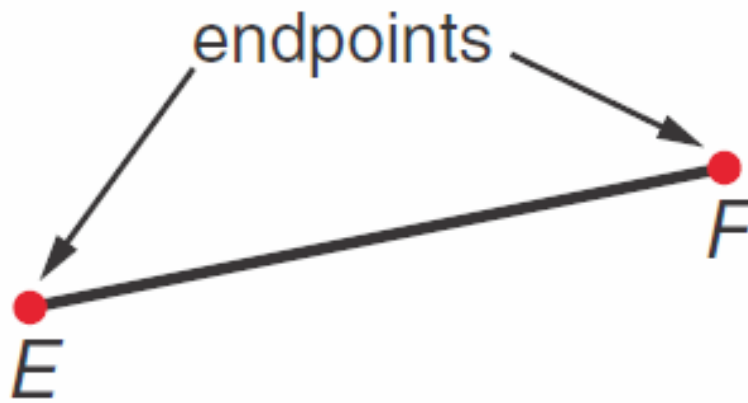
Inch (in) – a U.S. customary unit of length equal to $\frac{1}{12}$ of a foot



Length – typically, the longer side of a rectangle



Line Segment – a part of a line between and including two points called endpoints; often named by its endpoints

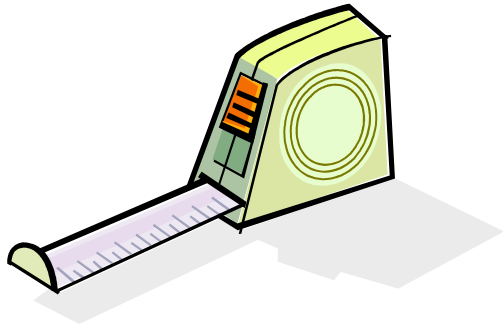


Segment EF , or \overline{EF}

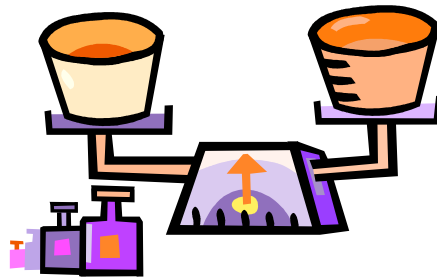
Meter (m) – the basic metric unit of length from which other metric units of length are derived



Metric System – a system of measurement based on the base-10 (decimal) numeration system and used in most countries and by almost all scientists in the world



Meters



grams



liters

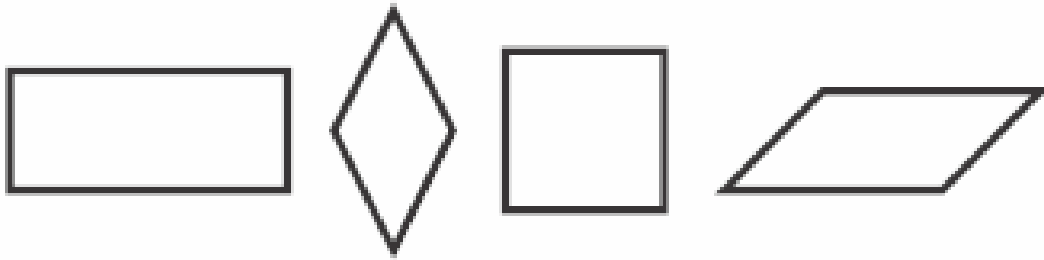
Millimeter (mm) – $\frac{1}{1000}$ of a meter

Milli = $\frac{1}{1000}$

1 millimeter

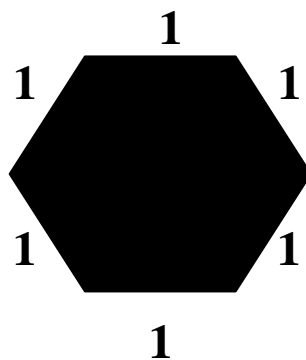
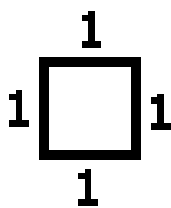


Parallelograms — a quadrilateral with two pairs of parallel sides; opposite sides have the same length, and opposite angles have the same measure



Parallelograms

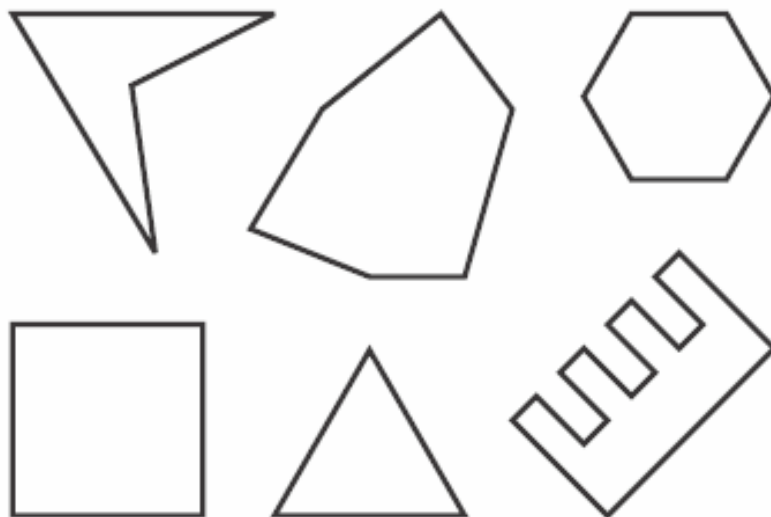
Perimeter — the distance around the boundary of a 2-dimensional figure.



Personal References (for Measurement) – using common objects to estimate lengths and distances when a standard measuring tool (ruler, meter stick) is not available

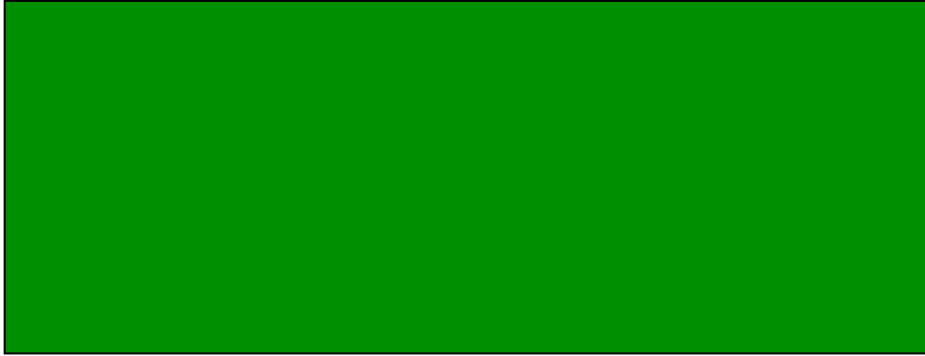
Personal References for U.S. Customary Units of Length	
About 1 inch	About 1 foot
Length of a paper clip	Length of a man's shoe
Width of a quarter	Length of a license plate
Width of a man's thumb	Length of your math journal
About 1 yard	About 1 mile
Width of a door	2,000 average-size steps (for an adult)
One big step (for an adult)	Length of 15 football fields (including the end zones)
Height of a kitchen counter	

Polygon – a 2-dimensional figure formed by three or more line segments (sides) that meet only at their endpoints (vertices) to make a closed path; sides may **not** cross one another

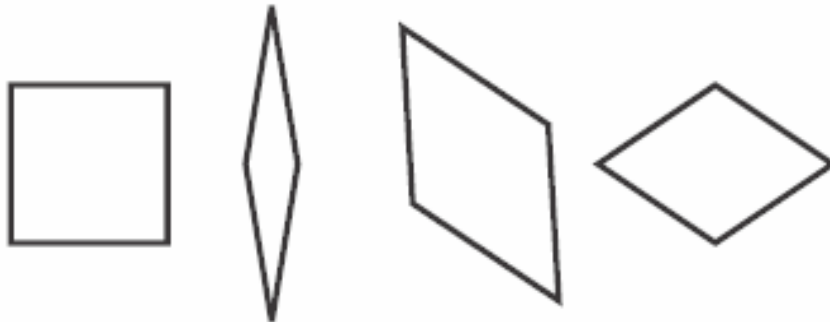


Polygons

Rectangle – a parallelogram with all right angles

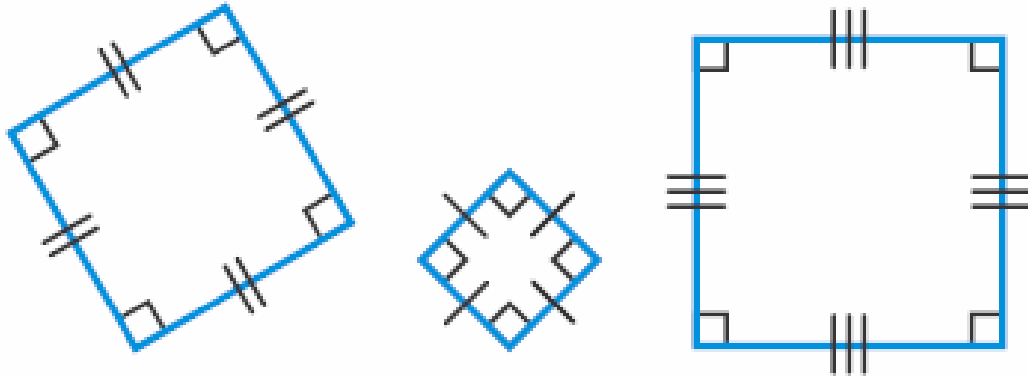


Rhombus – a parallelogram with all sides the same length; every square is a rhombus, but not all rhombuses are squares



Rhombuses

Square – a rectangle with all sides of equal length; all angles in a square are right angles; all squares are also rectangles, but not all rectangles are squares



Squares

Square units – a unit to measure area

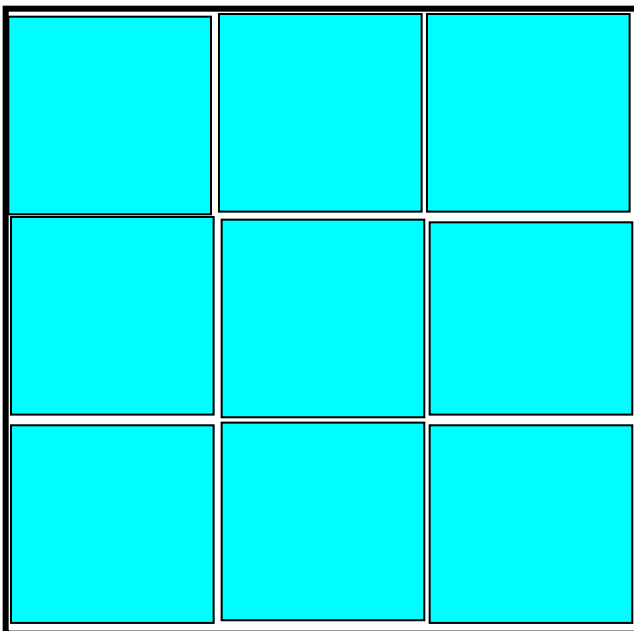


Square units

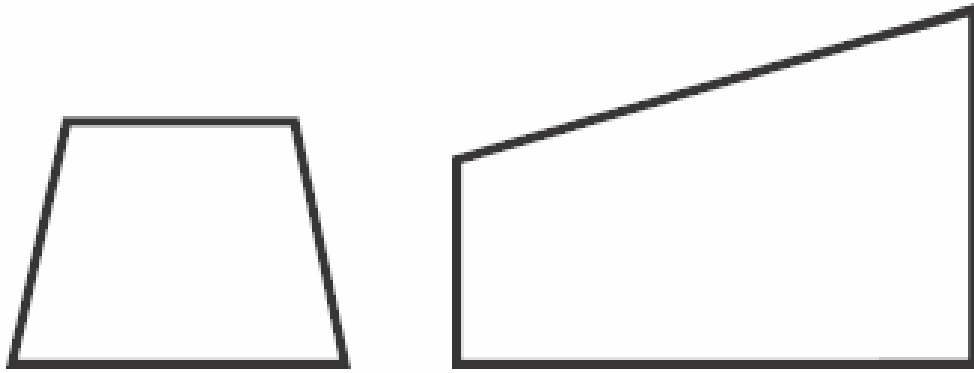
Standard Unit — when people agree to use the same unit of measure, it is called a standard unit



Tiling — to cover a surface with shapes so that there are no gaps or overlaps



Trapezoid – a quadrilateral that has exactly one pair of parallel sides; both pairs of sides cannot be parallel



Trapezoids

Triangle – a three-sided polygon



equilateral

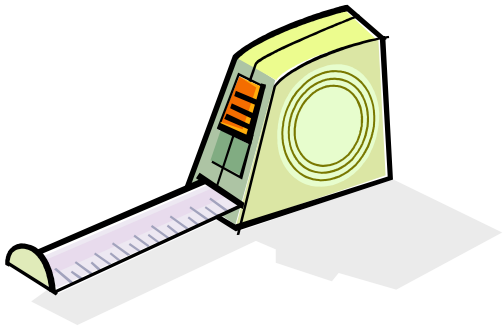
isosceles

scalene

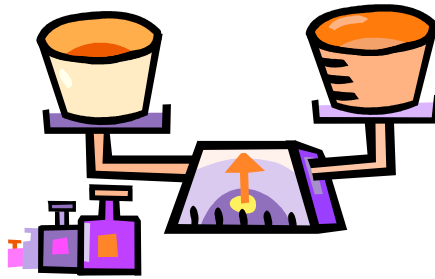
right

Triangles

U.S. Customary Measure – the measuring system used most often in the United States



Inches, Feet, Yards

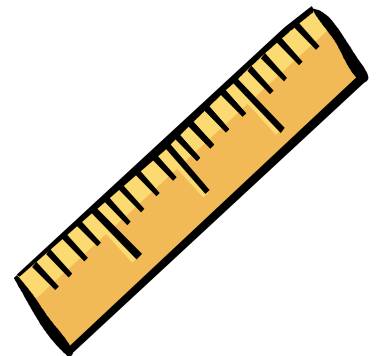
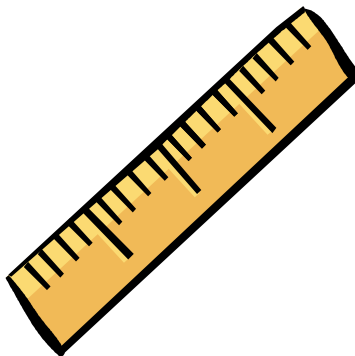
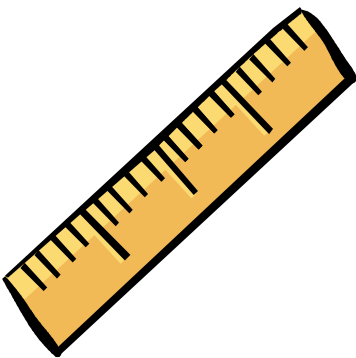


ounces, pounds



**ounces, cups, pints,
quarts, gallon**

Yard – a U.S. customary unit of length equal to 3 feet or 36 inches



3 feet = 1 yard